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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,768	07/10/2003	Steven A. Zettel	101AC-045	2283

7590 06/16/2005

Bradley N. Ruben, PC
Suite 5A
463 First Street
Hoboken, NJ 07030

EXAMINER

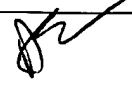
NGUYEN, CHAU N

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/616,768	Applicant(s) ZETTEL ET AL. 	
	Examiner Chau N. Nguyen	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
 4a) Of the above claim(s) 16-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 13 and 15 is/are rejected.
- 7) ☒ Claim(s) 10, 12 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "1078" in Figure 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 5-9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama (4,278,717) in view of Weil (5,617,900).

Aoyama discloses a compressed knitted wire mesh element (Figure 5) consisting essentially of a combination of two wire meshes. Aoyama does not disclose the mesh element comprising an annealed soft wire mesh and a hard wire

mesh that does not soften at the elevated temperature of a catalytic converter, wherein the soft wire mesh is present on the outer surface of the element. Weil discloses a mesh element comprising an inner mesh (20) and an outer mesh (40), wherein the inner mesh is a hard wire mesh and the outer mesh is an annealed soft wire mesh (col. 3, lines 48-51 and lines 64-67). It would have been obvious to one skilled in the art to use soft wire mesh for the outer mesh and to use hard wire mesh for the inner mesh of Aoyama to provide the mesh element with pliability, strength and corrosion resistance.

The modified element of Aoyama also discloses the element having a rectilinear geometry (re claim 6), the element being in the geometry of an annulus having a flange at an edge thereof (col. 5, lines 32-38) (re claim 7), and the annulus having multiple mesh layers (re claim 8). Re claims 5 and 13, it would have been obvious to one skilled in the art to use precipitation-hardened stainless steel for the hard wire in the modified mesh element of Aoyama since precipitation-hardened stainless steel is known in the art for its corrosion resistance properties. Re claim 9, it would have been obvious to one skilled in the art to use the modified mesh element of Aoyama in a catalytic converter assembly since it provides both resilience and strength. In addition, it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the

claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

5. Claims 2, 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama in view of Weil as applied to claim 1 above, and further in view of Jaraczewski et al. (4,817,613).

The combination of Aoyama and Weil discloses the invention substantially as claimed except for the soft wire being flat. Jaraczewski et al. discloses a mesh comprising flat wires. It would have been obvious to one skilled in the art to use flat wire for the soft wires of Aoyama since flat wires are less prone to kinking as taught by Jaraczewski et al.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama in view of Weil as applied to claim 1 above, and further in view of Usher (4,607,851).

Claim 3 additionally recites the soft wire being at least as heat resistance as type 309 stainless steel. Usher discloses a mesh seal comprising 309 stainless steel wire. It would have been obvious to one skilled in the art to use wire having heat resistance at least as type 309 stainless steel, as taught by Usher, for the soft wire of Aoyama so that the element can be used in high temperature applications.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama in view of Weil as applied to claim 1 above, and further in view of Sawada et al. (5,091,609).

Claim 4 additionally recites the soft wire having an oxide coating on its surface. Sawada et al. discloses a wire having an oxide coating on its surface. It would have been obvious to one skilled in the art to provide an oxide coating on the surface of the soft wire of Aoyama to provide the wire with a good insulating strength as taught by Sawada et al.

Allowable Subject Matter

8. Claims 10, 12 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Chau N Nguyen', with a long horizontal flourish extending to the right.

Chau N Nguyen
Primary Examiner
Art Unit 2831